

NOV 14 2005

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:  
Calvignac et al ) Examiner: S. S. Ismail  
 Serial No. 09/934,886 )  
 Filed: August 22, 2001 ) Art Unit: 2155  
 For: STATELESS MESSAGE PROCESSING ) Confirmation No. 8162  
 SCHEME FOR NETWORK PROCESSORS  
 INTERACTIONS )

Docket No. RAL920010026US1 – Our File IRA-10-5591

## APPEAL BRIEF

Mail Stop Appeal Brief - Patents  
 Commissioner for Patents  
 P. O. Box 1450  
 Alexandria, VA 22313-1450

Dear Sir:

**I. REAL PARTY IN INTEREST**

The real party in interest in the above-entitled application is International Business Machines Corporation of Armonk, New York.

**II. RELATED APPEALS AND INTERFERENCES**

The undersigned attorney is not aware of, and on information and belief, neither the appellants nor the assignee is aware of, any related appeals or interferences which would directly affect, or be directly affected by, or have a bearing on the Board's decision in this pending appeal.

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### III. STATUS OF THE CLAIMS

Claims 1-12 are on appeal, all of the claims presently in the application. No claims have been allowed. Claims 1, 4-7, and 11-12 were amended during prosecution, and all 12 claims as amended, are attached hereto in the CLAIMS APPENDIX.

### IV. STATUS OF AMENDMENTS

All proposed amendments have been entered, so no issues as to entry of amendments are present.

### V. SUMMARY OF THE INVENTION

According to the present invention, a stateless message-passing scheme for interactions between a network processor 10 (page 3, line 10, Fig 1) and a coprocessor 16 (page 3, line 11, Fig. 1) is provided. According to this scheme, the network processor, when receiving data frames for transmission from a network 14 (page 3, line 11, Fig. 1) element to another network element, encapsulates the entire packet that it receives within a frame 18 (page 3, lines 17 and 18). In this frame, there is provided a header field and a data field 20, 22 (page 3, line 13, Fig. 2). The data field contains the data that needs to be transferred, and the header field contains all of the information regarding the deep-processing that the coprocessor 16 (page 4, lines 8-12) is to perform so that no information of any type need be stored either by the network processor or separately regarding the processing of the data in the data packet 20 (page 3, line 20, Fig. 2). By way of example and just as an example not as a limitation, the header may include the frame length, any encryption algorithm if encryption is to be performed, any hash algorithm if hashing is to be performed, any compression algorithm if compression is to be performed, any special

functions, any options present, any encryption key length, any encryption key value and encryption mode parameter length, encryption mode parameter value, hash key length, hash key value, any compression algorithm parameter lengths, any compression algorithm parameter values, any application-defined header length, application-defined header value and data length and data value. The header also indicates whether the packet is being passed to the coprocessor for packet processing 20 (page 4, line 19, to page 6, line 2, Fig. 2) or whether it is being passed from the coprocessor to the network processor after having had the processing functions performed. Also, in one version of the present invention, if the sequence of passing of the data is important, then all data frames are passed from the network processor to the coprocessor whether or not the coprocessor is to perform any processing function thereon. Thus, the only buffer (page 8, line 12) that is needed is a FIFO buffer to maintain the sequence of the packets. After processing in the coprocessor, wherein the necessary changes are made, the frame 18 is returned to the processor 10 for transmission or whatever other functions are to be performed (page 4, lines 8-12).

#### VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The examiner has finally rejected claims 1-12 under 35 U.S.C. 102 (e) as being anticipated by Ben-Ze'ev et al, U.S. Patent 6,687,757 B1, hereinafter Ben-Ze'ev et al. This rejection is not thought to be well taken.

#### VII. ARGUMENTS

While it is true that Ben-Ze'ev et al show both a processor and coprocessor constituting each processing unit, e.g. 253, 254, they are connected differently and to perform different functions from those taught and claimed in the instant application. For example, as claimed in method claim

1 and structure claim 7, the processor takes a data packet, makes it into a frame with headings and then passes the frame with the headings to the coprocessor, which coprocessor performs any operations required by the header, modifies the header *and returns the frame to the processor. The processor then transmits the packet with the modified heading on the network.* This is not taught nor suggested by Ben-Ze'ev et al. First, the coprocessor of Ben-Ze'ev et al may receive data from the bus directly. "The processor 400 and coprocessor 401 have each access to the tubular bus." (col. 12, lines 45-46). In applicants' method and structure, and as claimed in claims 1 and 7, the coprocessor gets the data frame composed by the processor and acts only on the heading. In Ben-Ze'ev et al, the coprocessor acts on the data, e.g. DES and CRL, and not just to modify the heading. In applicants' application, the coprocessor *always returns the frame to the processor for transmission on the network.* None of this is taught nor suggested by Ben-Ze'ev et al. The examiner refers to col. 12, lines 13-35, and col. 11, lines 8-44, for some of these features, but these locations refer only to the processing unit(s) and not to the interaction of the coprocessor and processor which is required by applicants' claims 1 and 7.

Prior art is anticipatory only if every element of the claimed invention is disclosed in a single item of prior art in the form literally defined in the claim. Jamesbury Corp. v. Litton Indus. Products, 756 F.2d 1556, 225 USPQ 253 (Fed. Cir. 1985); Atlas Powder Co. v. du Pont, 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); American Hospital Supply v. Travenol Labs, 745 F.2d 1, 223 USPQ 577 (Fed. Cir. 1984).

"Anticipation requires identity of the claimed process and a process of the prior art; the claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference" Glaverbel Societe Anonyme v. Northlake Marketing & Supply, Inc., 45 F.3d 1550, 1554, 33 USPQ2d 1496, 1498 (Fed. Cir. 1995).

A possibility or probability that features of the prior art contained in the disclosure of the prior art is not enough to establish anticipation. The same characteristics must be a "natural result flowing" from what is disclosed (Continental Can Co. v. Monsanto Co., 20 USPQ2d 1746, 1749 (Fed Cir. 1991). Clearly, Ben Ze'ev et al do not show each step and each structure specifically claimed in claims 1 and 7.

With respect to claims 2-6 and 8-12, these are dependent, directly or indirectly, on claims 1 and 7, respectively, and for the same reasons are believed to be allowable. Moreover, claims 2 and 8 require that all data with created headers be sent to the coprocessor and returned to the processor in the order it was received. This is neither taught nor suggested by Ben-Ze'ev et al, and especially not at the location cited by the examiner (col. 12, lines 57-67). While the information is delivered from the coprocessor to a FIFO, this speaks only to the information *after* it is delivered from the coprocessor, not the order in which it is delivered *from* the coprocessor. Thus, for this additional reason, claims 2 and 8 are believed to be allowable.

Claims 3 and 9 require that the processor used to transmit data be able to receive data with the modified header, pass this to the coprocessor, which restores the original header, and return the frame to the processor. It is neither taught nor suggested by Ben-Ze'ev et al that a single processor-coprocessor unit can act to send and receive and, for this additional reason, claims 3 and 9 are believed to be allowable.

With respect to claims 4 and 10, these require that there be two processors connected to pass data therebetween. It is submitted that this is not taught nor suggested by Ben-Ze'ev et al, especially at the location cited by the examiner where the processors and coprocessors are handled only as a unit, and not individually. Thus, for this additional, reason claims 4 and 10 are believed to be allowable.

With respect to claims 5, 6, 11 and 12, it is submitted that there is no teaching where any information for creating headers is located, and this is not taught nor suggested by Ben-Ze'ev et al. Thus, for this additional reason, claims 5, 6, 11 and 12 are believed to be allowable.

For the above reasons, each of the claims now in the application is distinguishable, one from the other and over the prior art. Thus the board is respectfully requested to reverse the examiner and allow all of the claims on appeal.

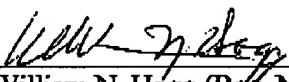
#### SUMMARY

In view of the above, it is believed that each of the claims is distinguishable, one from the other, and over the prior art.

Thus, the Board is respectfully requested to reverse the examiner, and allow all of the claims.

Respectfully submitted,

Date: 11/14/05

  
William N. Hogg (Reg. No. 20,156)  
**CUSTOMER NO. 26675**

WNH:cg

Attachments

## CLAIM APPENDIX

1. A method of operating a network for transmission of data between users, and wherein said network includes at least one network processor and at least one coprocessor associated with said network processor, and wherein said data is passed to said network processor in data packets, said method comprising:

each of said network processors encapsulating the data in each packet into a data frame before transmission on the network, and wherein said network processor provides a header for the data in each data frame which includes all the information necessary to direct the coprocessor to perform all required operations on said data,

passing at least some data frames, including the header thereof, from said network processor to said coprocessor associated therewith before transmission on the network,

performing any operations required by the header in said coprocessor on said data before transmission on the network,

modifying said header information by said coprocessor after performing said required operations,

returning said data frame from said coprocessor to said network processor with said modified header, and

thereafter transmitting said data with said modified heading on said network.

2. The invention as defined in claim 1 wherein all data frames with said created headers are sent to the coprocessor associated with said network processor and said coprocessor returns said data in the order it was received from the network processor.

3. The invention as defined in claim 1 wherein said network processor can receive data with the modified data header, passing said received data with the modified header to said coprocessor associated therewith, restoring the data from its modified form to its original form in the coprocessor and returning said stored data to the network processor.

4. The invention as defined in claim 3 wherein there is at least two network processors on said network and each of said processors is configured to pass data with created headers therebetween.

5. The invention as defined in claim 2 wherein the information for generating said header is contained, at least in part, in said network processor.

6. The invention as defined in claim 3 wherein the information for generating said header is contained, at least in part, in said data packets.

7. A network for transmission of data between users comprising:  
a network processor and at least one coprocessor associated with said network processor,  
said data being passed to said network processor in data packets;  
each of said network processors including programming which encapsulates the data in each packet into a data frame before transmission on said network, including a header for the data in each data frame, which header includes all the information necessary to direct the coprocessor to perform all required operations on said data and to pass at least some data frames,

including the header thereof, from said network processor to said coprocessor associated therewith;

programming in said coprocessor to read and perform any operation required by the header on said data before transmission on the network,

programming in said coprocessor to modify said header information after performing said required operations on the data and to return said data frame from said coprocessor to said network processor with said modified header, and

thereafter transmitting said data with said modified heading on said network.

8. The invention as defined in claim 7 wherein said programming in said network processor will send all data frames with said created headers to the coprocessor associated with said network processor, and said programming in said coprocessor will return said data frames in the order they were received from the network processor.

9. The invention as defined in claim 7 wherein said programming in the network processor can receive data with the modified data header, pass said received data with the modified header to said coprocessor associated therewith, and said programming in said coprocessor can restore the data from its modified form to its original form in the coprocessor and return said restored data to the network processor.

10. The invention as defined in claim 7 wherein there is at least two network processors and each of said processors is configured to pass data with created headers therebetween.

11. The invention as defined in claim 8 wherein the information for generating said header is contained, at least in part, in said network processor.
12. The invention as defined in claim 9 wherein the information for generating said header is contained, at least in part, in said data packets.

## EVIDENCE APPENDIX

None.

## **RELATED PROCEEDINGS APPENDIX**

**None known to undersigned attorney.**

NOV 14 2005

*Certificate of Facsimile Transmission*  
 I hereby certify that this correspondence is being faxed to the United States Patent Office on NOVEMBER 14,  
 2005, to No 571-273-R300 and addressed to Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450,  
 Alexandria, VA 22313-1450.

*Carole Giaconia*  
 Carole Giaconia

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	)	Examiner: S. S. Ismail
Calvignac et al	)	
Serial No. 09/934,886	)	Art Unit: 2155
Filed: August 22, 2001	)	
For: STATELESS MESSAGE PROCESSING SCHEME FOR NETWORK PROCESSORS INTERACTIONS	)	Confirmation No. 8162

Docket No. RAL920010026US1 – Our File IRA-10-5591

## TRANSMITTAL OF APPEAL BRIEF

Mail Stop Appeal Brief - Patents  
 Commissioner for Patents  
 P. O. Box 1450  
 Alexandria, VA 22313-1450

Dear Sir:

- Transmitted herewith is the APPEAL BRIEF in this application with respect to the Notice of Appeal filed on September 15, 2005.

Note: "The applicant shall, within 2 months from the date of the notice of appeal under § 1.191 in an application, reissue application, or patent under reexamination, or within the time allowed for response to the action appealed from, if such time is later, file a brief in triplicate." 37 CFR 1.192(a) [emphasis added].

## 2. STATUS OF APPLICATION

This application is on behalf of

- other than a small entity  
 small entity

Verified statement:

- attached  
 already filed

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### 3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 CFR 1.17(f) the fee for filing the Appeal Brief is:

- |                                     |                         |           |
|-------------------------------------|-------------------------|-----------|
| <input type="checkbox"/>            | small entity            | \$ 250.00 |
| <input checked="" type="checkbox"/> | other than small entity | \$ 500.00 |

**Appeal Brief fee due: \$500.00**

### 4. EXTENSION OF TERM

Note: The time periods set forth in 37 CFR 1.192(a) are subject to the provision of § 1.136 for patent application. 37 CFR 1.191(d). Also see Notice of November 5, 1985 (1060 O.G. 27).

The proceedings herein are for a patent application and the provisions of 27 CFR 1.136 apply.

(complete (a) or (b) as applicable)

- (a) Applicant petitions for an extension of time under 37 CFR 1.136  
 fees:  37 CFR 1.17(a)-(d)) for the total number of months checked below:

	Extension Months	Fee for other than small entity	Fee for small entity
<input type="checkbox"/>	one month	\$120.00	\$60.00
<input type="checkbox"/>	two months	\$450.00	\$225.00
<input type="checkbox"/>	three months	\$1,020.00	\$510.00
<input type="checkbox"/>	four months	\$1,590.00	\$795.00

Fee:

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

An extension for \_\_\_\_\_ months has already been secured and the fee paid therefor of \$\_\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$\_\_\_\_\_

or

- (b) Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

5. **TOTAL FEE DUE**

The total fee due is:

Appeal Brief fee	\$500.00
Extension fee (if any)	\$ 0.00

**TOTAL FEE DUE: \$500.00**

6. **FEES PAYMENT**

- Attached is a check in the sum of \$\_\_\_\_\_
- Charge Account No. 50-0563 in the sum of \$500.00. A duplicate of this transmittal is attached.

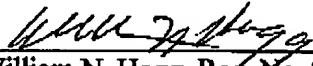
7. **FEES DEFICIENCY**

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.

- If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 50-0563.
- AND/OR
- If any additional fee for claims is required, charge Account No. 50-0563.

Respectfully submitted,

Date: NOVEMBER 14, 2005

  
William N. Hogg, Reg. No. 20,156  
CUSTOMER NO. 26675

Attachment